

SETTLEMENT AGREEMENT REPORT

October - December 2014

Stuart Van Horn, P.E.

Section Leader

Compliance Assessment & Reporting Section Water Quality Bureau

Technical Oversight Committee April 28, 2015



SUMMARY

Month			etric Mean ntration (ppb)	Long-term Level (ppb)		Mean Stage (feet NGVD 29)			Number of Samples	
Arthur R. Marshall Loxahatchee National Wildlife Refuge										
Oct 2014			7.9		7.2		17.34		14	
Nov 20	Nov 2014		6.0 7.3		3	17.10		14		
Dec 20	Dec 2014		5.6	7.6		,	17.01		14	
Period 'C'		l Flow	12-Month Flow-weighted Me		Long-teri		Limit Great		of Sampling Events ter than 10 ppb	
Ending	Ending (ka		TP Concentra		(ppl	b)	Guidelin	е	Observed	
Everglades National Park – Shark River Slough										
Oct 2014	The quarterly flow and TP data for this table are posted separately on the TOC website. The annual									
Nov 2014	comp	compliance result for the 12-month flow-weighted mean TP concentration for the federal water year								
Dec 2014	endir	ending on September 30 will be published in this report when the final approved flow data are available.								
Everglades National Park – Taylor Slough and Coastal Basins										
Oct 2014	20	0.6	4.2		11.	0	53.1		1.3	
Nov 2014	20	04.9	4.3	1	11.	0	53.1		1.3	
Dec 2014	19	98.6	4.4		11.	0	53.1		1.4	



Refuge TP Compliance Tracking For October 2014 – March 2015

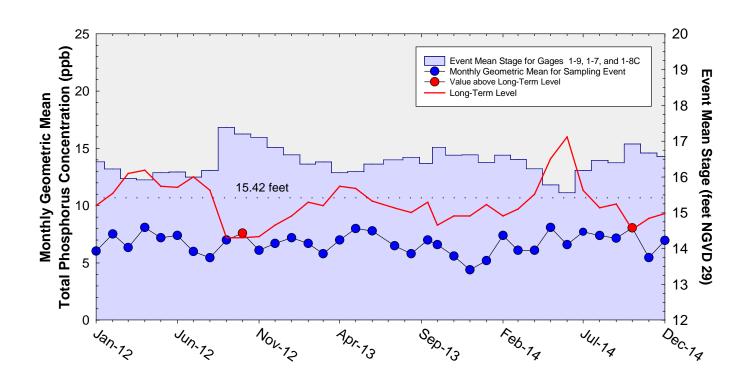
Month	Geometric Mean TP Concentration (ppb)	Long-Term Level (ppb) Effective 12/31/2006	Average Stage (feet NGVD 29)	Number of Samples
Oct-2014	7.9*	7.2	17.34	14
Nov-2014	6.0	7.3	17.10	14
Dec-2014	5.6	7.6	17.01	14
Jan-2015	8.1*	7.9	16.92	14
Feb-2015	5.5	8.9	16.67	14
Mar-2015	7.0	9.3	16.57	14

Note: January to March 2015 values are preliminary.

^{*} October 2014 geometric mean was higher than the long-term level for the month. Preliminary data for January 2015 geometric mean was also higher than the long-term level for the month.



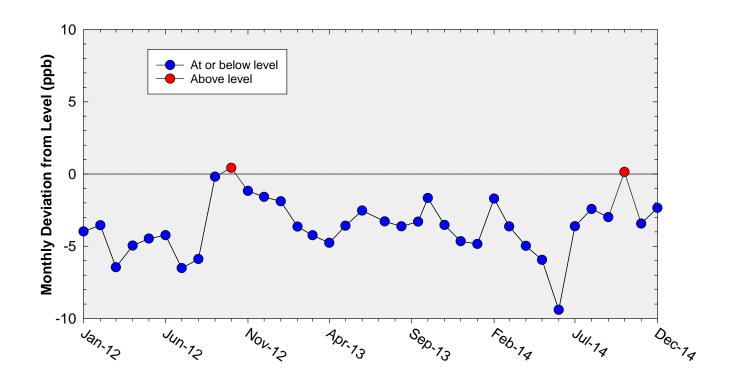
A.R.M Loxahatchee National Wildlife Refuge Monthly Total Phosphorus Geometric Mean Concentrations





A.R.M Loxahatchee National Wildlife Refuge

Deviation of monthly geometric mean total phosphorus concentrations with calculated long-term levels





Shark River Slough TP Concentration Compliance Interim Tracking for October 2014 – December 2014

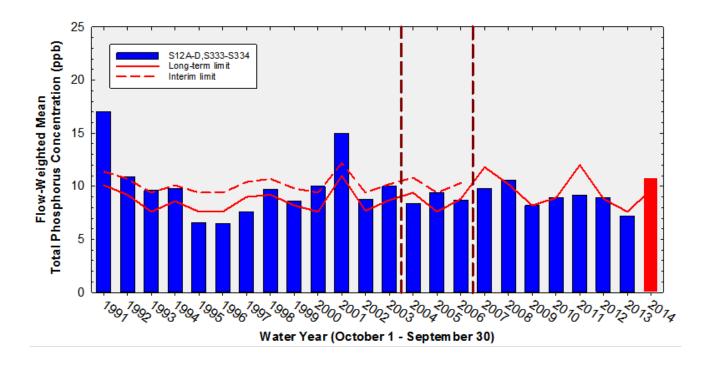
(October 2014 – December 2014 Flow Data for \$12s are Provisional)

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) Effective	Percent of Sampling Events Greater than 10 ppb	
	(au i i		12/31/2006	Guideline	Observed
Nov 2013 - Oct 2014	606.6	11.5	9.9	51.9	40.9
Dec 2013 - Nov 2014	605.2	11.6	10.0	51.9	40.9
Jan 2014 - Dec 2014	588.5	11.7	10.0	52.4	39.1

Note: All values are preliminary.



Annual Flow-weighted Mean Concentrations Inflows to ENP through Shark River Slough

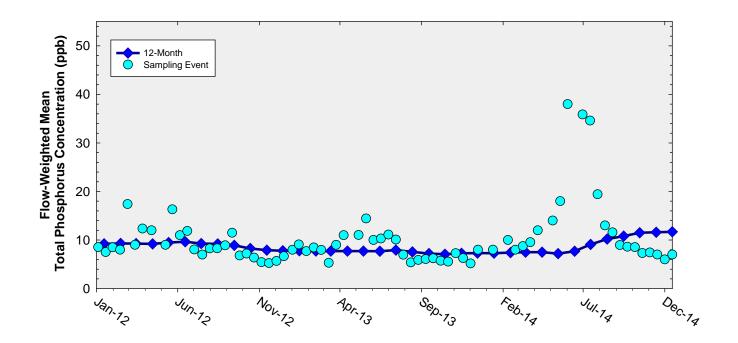


12-month FWMC at the end of each water year compared to the TP interim and long-term limits



Flow-Weighted Mean Concentrations Inflows to ENP through Shark River Slough

(October 2014 – December 2014 Flow Data for S12s are Provisional)

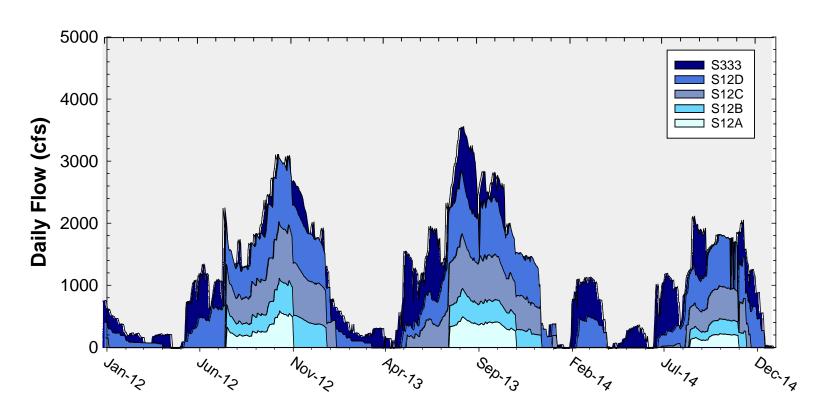


12-month FWMC at the end of each month and the composite TP concentration for each sampling event



Shark River Slough Daily Flows

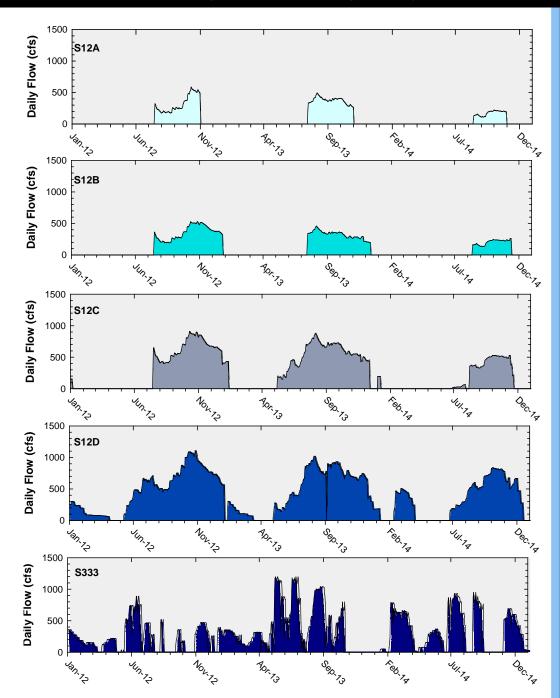
(October 2014 – December 2014 Flow Data for S12s are Provisional.)



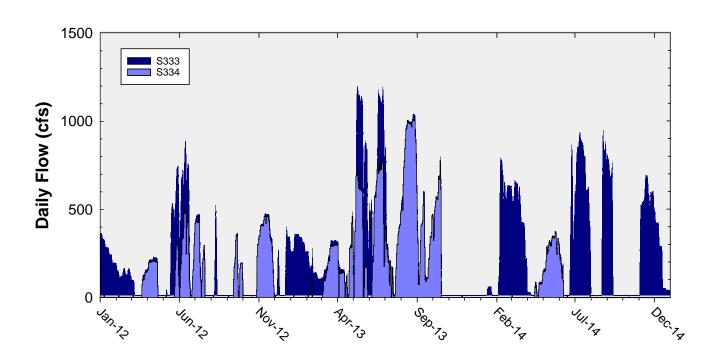


Daily Flows at individual inflow structures to Shark River Slough

(October 2014 – December 2014 Flow Data for S12s are Provisional)



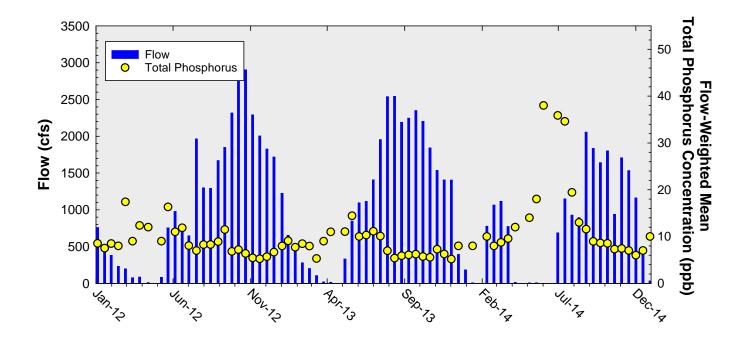
Daily Flows at S333 and S334





Shark River Slough Sampling Event Flow and FWMC

(October 2014 – December 2014 Flow Data for \$12s are Provisional)



Flow at Shark River Slough structures and the corresponding TP FWMCs for individual sampling events



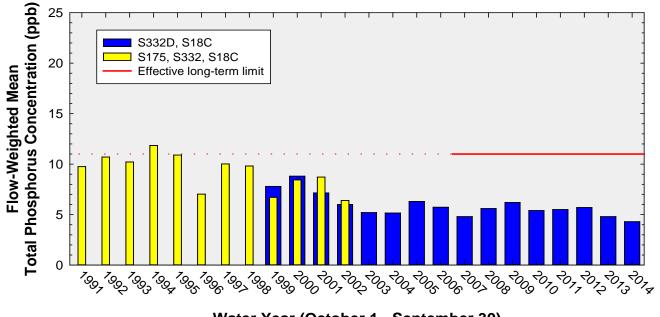
Taylor Slough and Coastal Basins TP Concentration Compliance Tracking for October 2014 – December 2014

12-Month Period	Total Flow (kac-ft)	Flow-Weighted Mean TP Concentration (ppb)	Long-Term Limit (ppb) Effective 12/31/2006	Percent of Sampling Events Greater than 10 ppb		
	(illus ily			Guideline	Observed	
Nov 2013 - Oct 2014	200.6	4.2	11.0	53.1	1.3	
Dec 2013 - Nov 2014	204.9	4.3	11.0	53.1	1.3	
Jan 2014 - Dec 2014	198.6	4.4	11.0	53.1	1.4	



Annual Flow-Weighted Mean Concentrations

Inflows to the ENP through Taylor Slough and Coastal Basins



Water Year (October 1 - September 30)

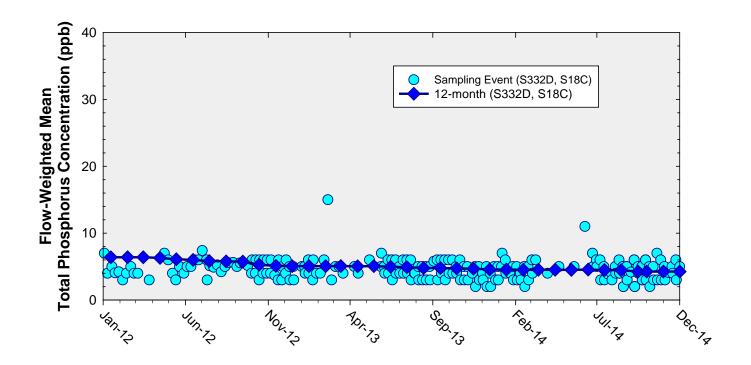
The 12-month FWMC at the end of each water year compared to the 11 ppb long-term TP limit

Note: S174 was plugged in September 2007.



Flow-Weighted Mean Concentrations

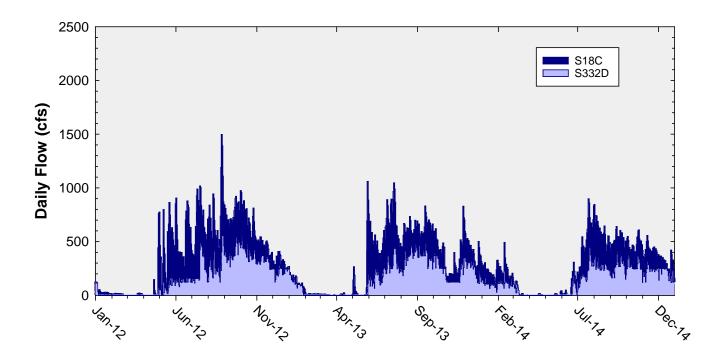
Inflows to the ENP through Taylor Slough and Coastal Basins



The 12-month FWMC at the end of each month and the composite TP concentration for each sampling event

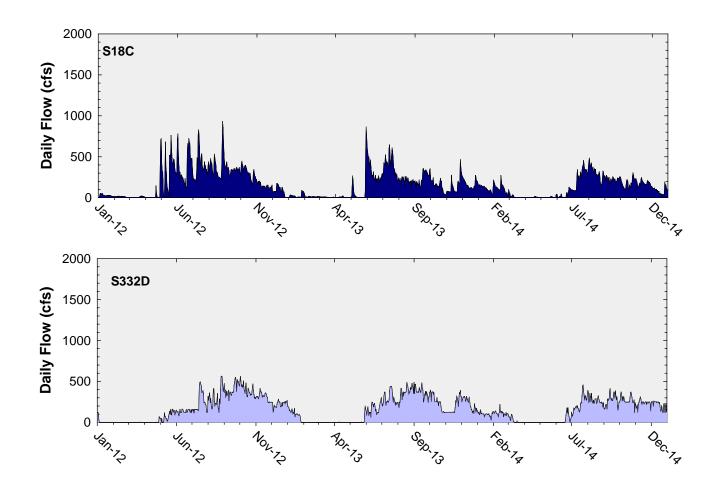


Daily Flows at Taylor Slough and Coastal Basins structures into ENP



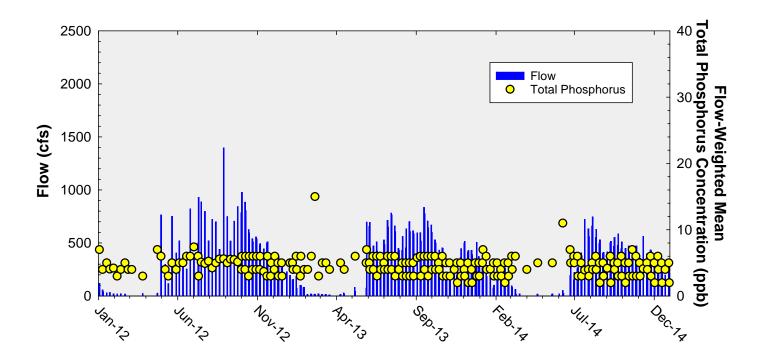


Daily Flows at Individual Taylor Slough and Coastal Basins Structures into ENP





Taylor Slough and Coastal Basins Sampling Event Flow and FWMC



Flow at Taylor Slough and Coastal Basins structures and the corresponding TP FWMCs for individual sampling events



